Presentation by Alex Hildebrand for
SDWA to SWRCB on November 18, 1996

In establishing an appropriate process for review of Vernalis flow objectives it is important that several considerations be addressed.

1) First, there should be a determination of whether the justification for the previously proposed level and time of Vernalis flow was based on biological data that are representative of future situations.

- Was the data on which the proposal was based taken while the South Delta barriers were functioning?
- Did the analysis distinguish between flows needed within the tributaries versus flows needed in the main stem of the river?
- Was the data taken when export schedules were similar to those now anticipated?
- Has the competition with exotic species increased since the data was taken? (The Nature Conservancy states that "If living organisms in all but the deepest parts of the Bay were put on a scale, exotic species would weigh in at 90% of the estuary life").

In view of the growing shortage of water, we should not allocate large quantities of water for fish flows that may be of little or no benefit as compared to lesser quantities.

2) Second, there should be a determination of whether the proposed flows are reasonably achievable on a long term basis in terms of the water supply available in the San Joaquin watershed

- Can the desired flows reasonably be provided by reducing diversions by the junior water right diverters on the tributaries?
- Can they instead be achieved by other means?

I will not dwell on the justification for the previously proposed Vernalis flows. I believe others will do so. However, it is my understanding that the proposals are not based on

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anticipated future situations, and do not distinguish between flows needed for habitat within each tributary and flows needed at Vernalis and upstream of Vernalis which could be supplied from the Delta Mendota Canal.

As regards the availability of water in the watershed, it is not clear that enough water for the proposed Vernalis fish flows is even theoretically available from the tributaries if exports from Friant and from Hetch Hetchy and by riparian diverters are exempted.

The annual Vernalis flow has been reduced by about two million acre feet since the CVP went into operation. Almost one third of this reduction is attributable to the CVP (refer to USBR-SDWA June 1980 report). CVP water rights are inferior to most water rights on the tributaries and along the main stem of the San Joaquin. The CVP should, therefore, be required to mitigate its impact before superior water rights are cut back. I will explain how this can be done without reducing deliveries to Federal contractors. The available water supply in the San Joaquin River System is already seriously overcommitted. Consequently, any proposal to increase flows at one time of the year from tributary sources must also establish Vernalis flows for the entire year in order to avoid inadequate flow in other seasons. Any increase in flow for fishery at one time of year will be at the expense of a decrease in flow during the summer if the flow is taken from the tributaries. There will, therefore, be serious inadequacies of summer streamflow and violations of the priority of water rights unless the SWRCB establishes the time and amount by which junior diversions must cease at all seasons.

The Board must also protect the water quality rights of riparian and other senior diverters on the main stem of the river by establishing salinity standards upstream of Vernalis and by requiring the CVP to mitigate its impact on salinity sufficiently to meet those and the Vernalis salinity standard. This can be

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done by a combination of DMC releases and control of the drainage entering the river from Salt and Mud Sloughs.

The Board must therefore assure not only that the Vernalis flows are clearly needed, but also that the flows can be provided by means that comply with water right priorities and that do not require reductions in tributary diversions that will prove to exceed what the Board will judge to be a reasonable exercise of its authority.

We wish next to report on our collaboration with other parties in developing a plan to provide Vernalis fish flows without taking water from existing uses, and while also alleviating the salinity problem in the main stem of the San Joaquin River and reducing the large salinity control releases now required from New Melones. These discussions have been primarily with the San Luis and Delta-Mendota Water Authority (Dan Nelson), the Grassland Area Farmers (Dennis Falaschi and Dennis Wichelns), the Grassland Water District (Don Marciocchi and Gary Zahm), and representatives of the Westlands Water District who have done the needed preliminary modeling (Tom Boardman and Lance Johnson). Other parties who have been apprised of the plan include Roger Patterson, Allen Short, Paul Elias, the Stanislaus Stakeholders Group, and the Fish and Wildlife Service.

The plan has several interrelated components which must be viewed as a package. First, San Joaquin River flows would be augmented between April 15 and May 15 by releases of water to the river from the Delta Mendota Canal through the Newman Wasteway. These releases would be recaptured at the export pumps for reexport. Because of the travel times involved the recirculation system would be primed with water borrowed from San Luis Reservoir before April 15, and the borrowed water would be returned prior to May 15. This recirculation and reuse of water would be superimposed on the canal flows, the export pumping, and the contract deliveries that would otherwise occur. The tributary flows would be limited to what is clearly needed for

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fish habitat within each tributary and the remainder of whatever Vernalis flow is mandated would be provided by this recirculation of water. Funds from the Friant surcharge can be used to pay the cost of circulation.

A second component is that the South Delta barriers must function at all times, except during high, wet year flows, and if and when they must be opened for ESA protection. The barriers not only protect downstream fish migrants, they also reduce the salt load in the Delta Mendota Canal due to less recapture of the salt load in the river, thereby reducing the salinity problem caused by drainage into the river.

The third component of the plan is to retain from March 1 to April 15 most of the agricultural and grassland drainage that drains to the river through Salt and Mud Sloughs. This would be followed by a controlled release of this drainage to the river during the April 15 to May 15 fish flow. The fish flow will thereby serve also to dilute and flush the drainage salt load without any release from New Melones for the purpose of dilution during the March 1 to May 15 period. The DMC release must be adequate to avoid an increase in river salinity between the Merced and the Tuolumne during this period of controlled release. If this method of controlling salinity conflicts with any existing limitation on monthly selenium loads, that limitation should be modified or eliminated. Selenium concentrations will also be reduced by this proposal.

The agricultural drainers are now both able and willing to control most of their drainage, as proposed, by a combination of temporary surface and subsurface storage. The Grassland District will need some ditches and low lift pumps in order to move water within the District during March 1 to April 15, and to control the rate of release during April 15 to May 15. This could also be financed with some of the Friant surcharge funds.

Preliminary modeling by Westlands Water District indicates that the proposed recirculation of DMC water can be accomplished in almost all years with existing facilities and without reducing

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water deliveries that would otherwise be made and without any wheeling by SWP pumps. There may be opportunities to expand this basic approach at other times, but that will require more complex analyses.

We believe this approach should be implemented in 1997 on a limited and monitored scale, and then expanded as experience and the availability of Grassland facilities permit. This test operation can also serve to verify indications from past measurments that very little water would be lost during recirculation. If there does prove to be a loss, there are ways to replenish it. For example, New Melones could release a portion of the water saved by the reduction in water quality release which results from the plan.

We believe that this proposal complies with both the Accord and the Control Plan. We also believe that the Vernalis fish flows now in the Control Plan will not be achieved without this recirculation of DMC water. It does not appear that the Vernalis flows can be achieved by purchases on the tributaries that comply with the purchase provisions in Section 3405 of the CVPIA, and with limitations on B(2) water from the Stanislaus and with protection of riparian rights and consumptive public trust rights along the main stem of the river and in the South Delta, and with the limitations on obligation of the CVP to mitigate the problems it has caused in river flow and salinity. This plan will resolve these problems without depriving existing water users while also meeting the objectives of the Control Plan. We request that this Plan be included as a fully analyzed alternative in the SWRCB process.

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